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IN NEW ENGLAND.

The Companion Library.

Number Seventeen.

SELECTIONS

From The Youth's Companion.

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PERRY MASON & COMPANY,
Boston, Mass.



National Monument to the Forefathers.

Plymouth Rock.

Every summer thousands of people from the country outside New England visit the neighborhood of Boston. While there, they generally show no small amount of interest in historic sites. Many embark on the little steamer that plies daily between Boston and Plymouth, and make thus a pious pilgrimage to the celebrated Rock, which is coming to mean to Americans somewhat the same thing that the famous stone at Mecca means to the Moslems.

It is a pleasant trip by water to Plymouth. The visitor from a distant part of the country generally remains on the forward deck, watching the sandy shores, golden in the morning sun; he gazes interestedly at Minot's Ledge Lighthouse, of which there was a picture in the geography which he studied at school, and muses over the wooded shore of Marshfield, where Daniel Webster lived and died.

But long before Plymouth is reached, the pilgrim's attention is likely to be diverted from the great beauty of the bay and its hilly, monument-crowned shores by his extreme desire to get an early glimpse of the Rock.

All the strangers are simply straining their eyes to see the Rock; and when the landing is made on the long wharf, the procession of people from distant parts takes up a steady and rapid march toward a curious canopied structure in the distance, which has been pointed out to them.

The first thought which all of them have is this: "Why is the rock so far from the water?" It seems to be distinctly inland, and is really at several rods' distance from the present shore. And yet there is no doubt that it was formerly by the water's edge. The building of wharves and the dumping of earth for nearly three hundred years has carried the shore line out into the harbor.

When these modern pilgrims come flocking up, they behold

a structure of carved granite, which looks very tall in proportion to its diameter, with a round column at each corner. This structure is The Canopy. It is designed to mark the site of the Rock, and protect it from desecration.

Within this structure an iron fence surrounds the Rock itself. This fence tends to increase the reverential feeling that a visitor has for the Rock, for it seems to set it apart forever as a thing not to be touched. But at each end of the enclosure there is a gate; and these two gates are unlocked for visitors, and actual access to the Rock itself is permitted.



The Canopy.

This permission in its turn adds to the spirit of veneration, for one feels that, as the barrier of iron has been hospitably broken for his benefit, he must not fail to estimate the privilege at its highest valuation.

Then the crowd from the boat begin to file through, past the Rock, or upon it. In looking at them, one is made aware how false is the assumption that Americans are an unemotional people. They often behave in a most extraordinary way here.

Nearly all bend down and press the palms of their hands upon the Rock, and especially upon the figures 1620, which are sunk into its surface, as if the Pilgrims from the *Mayflower* had carved them there. Now and then a woman bends down and kisses the Rock, or makes a child do so. It is no uncommon thing for two people to stand on the stone and embrace each other. Many stand on the Rock long enough to make good resolutions, and imagine that they will keep them the more sacredly for their being made at such a place.

They are not deterred from making these demonstrations by the bearing of the crowd about them. There is no laughter and merrymaking about it; all is done with solemnity.

The hill which overlooks the Rock is indubitably sacred ground, for upon it the *Mayflower* Pilgrims—who died during that first terrible winter in the new colony were buried in unmarked graves, that they might not be counted by the Indians.

After visiting the Rock, excursionists scatter through the beautiful old town to admire its dainty white houses of ancient architecture, and its narrow streets deeply shaded with great linden and elm trees; or to visit the old Burial-Ground, the Museum and the Monument.

Visitors arriving in Plymouth by cars will naturally visit these places in reverse order. They will see on the hill, not far from the station, the National Monument to the Forefathers, a marble statue forty-five feet high, standing on a lofty pedestal



Plymouth from the Harbor.

which bears at the four corners symbolic figures, Freedom, Morality, Education and Law, and historic panels on its sides.

In Pilgrim Hall one is surprised to find so large a collection of articles brought over in the *Mayflower* and other relics of the earliest Colonial days. On Burial Hill it is interesting to see the earliest marked graves, and the site of the first church of Plymouth, which with cannon mounted on its roof was also the first fort. But after all, the most interesting object is the Rock.

To very few of these excursionists does it ever occur to

doubt the authenticity of the Rock, or to ask how it is known that the passengers of the *Mayflower* landed on it. Most people suppose that the Rock is mentioned in the early accounts of the landing ; but such is not the case.

There is but one original account of this first landing, and it relates that, after the people of the *Mayflower* had left Clark's Island, "they sounded ye harbour & found it fitt for shipping, and marched into ye land & found diverse corn-fields & little running brooks, a place fitt for situation ; at least it is ye best they could find." Nothing whatever is there about landing on

a rock ; nor does any early account of proceedings at Plymouth even mention a rock.

But in the year 1741, nearly one hundred and twenty-one years after the landing of the Pilgrims, permission was granted by the town of Plymouth to certain



Plymouth Rock.

persons to build a wharf on the shore ; and these persons proceeded then to cover up with their wharf a rock which lay there.

And then appeared Thomas Faunce, a man ninety-four years old, who lived in the farming country back of Plymouth. He told the wharf-builders that they ought not to cover up this rock. When he was a boy, he said, his father had assured him that the passengers of the *Mayflower* landed upon it.

It does not appear that any other Plymouth people came forward and supported this tradition. At any rate the wharf was built, and though the stone was not covered up, it became the door-step of a warehouse.

When people began to investigate the story of Thomas Faunce's warning, they looked in the records to see if his

father had been a passenger on the *Mayflower*, and they found that he had not. But they did find that Thomas Faunce was born in the year 1647, and that in his early life in Plymouth he must have known some of the *Mayflower's* passengers.

Therefore his story was entitled to some credit. Faunce was talking of a thing that was almost within his own recollection, and completely in the recollection of the generation before him.

Moreover, there are no other rocks along the shore in that neighborhood. This one, at the time of the landing, must have stood out, solitary and alone, on a shore which, according to the Pilgrims' relation, "was compassed about to the very sea with oaks, pines, juniper, sassafras and other sweet wood." In the midst of such a wilderness, a rock projecting boldly from the shallow shore would have provided a natural landing-place.

Farther down the bay, in the adjoining town of Kingston, there is at this day such another rock, not carried inland by the filling up of the shallow waters. One has but to approach this Kingston rock in a boat from the bay to see how its brother of Plymouth must have beckoned a welcome to the passengers of the *Mayflower*.

The Plymouth tradition of the Rock therefore seems to have a good basis in reason and probability. At any rate, it has grown steadfastly with time. And now the legend is fixed, and rendered sacred by time and common acceptance. The American who loves his country can hardly look without genuine emotion on this Rock of Plymouth, where the American experiment of local self-government was really begun under the most thrilling circumstances.

J. E. CHAMBERLIN.

Provincetown.

There is no quainter place on the stretch of coast from Cape Cod to Cape Ann, than the curious fishing town of which Thoreau has said, "A man may stand there and put all America behind him." Provincetown is not only a quaint town, pleasant to live in, but it is also an excellent place for shore work in natural history. That is the reason why a small party of people interested in science chose it for a collecting trip.

Provincetown has one main street. Therefore, when the night train comes in, the traveller is not puzzled about the way to turn. He soon reaches his hotel, where he is sure to get a cordial welcome, especially if he comes in the spring when guests are not numerous. At the time of year we went any stranger was a curiosity, and especially scientific strangers.

Crowds of youthful admirers followed our party about from place to place, rather more eager to have a finger in our pie than was convenient or desirable.

Cloudy days are rather more pleasant for work on the shore than on the water, and the first morning we spent in wandering along the uneven, sandy shore, where the wind has made many hills and hollows. There is not much vegetation to bind down the sands, and they continually tend to drift.

The Cape people erect in the most exposed places pyramids and hedges of staves, making them firm with stones so as to prevent the sand moving in an undesired direction. In a good many places a rough beach-grass grows, which forms the anchor of the Cape, since the woods which previously existed there have been buried by the sands.

At some places on the Cape the government erects stone embankments along the edge of the beach to prevent serious changes in the coast-line. The changes in the position of the sand were well shown a few years ago, when its shifting

exposed the wreck of a British vessel of the old colonial times, the existence of which had been unsuspected by the present generation. Farther down the Cape, at Orleans, there was uncovered in 1863 the hull of an ancient ship, a quarter of a mile from any water. The hull was supposed to be that of the *Sparrow-hawk*, stranded in 1626.

The windows on the sea-side of the Cape houses show the effects of the blowing sand, which grinds them until they become opaque. Between the hills of sand lying back of the beach are many cranberry bogs, covered in May with beautiful white flowers. Cranberries, next to fish, are the most important product of the Cape.

On the sand could be picked up many of the black, leathery, purse-shaped eggs of the skate, with their two prong-like extensions on each side. The eggs are among the common objects on the shore, and look very pretty when

covered with the delicate little sea-animals that grow over them. As we wandered we also found many bits of rockweed covered with the neatly-formed spiral tubes of some annelid worms.

We took a share in clam-digging, and turned up many of the soft or long clams used in every bake. This fellow is easy to get, as he lives just below the surface of the sand, and keeps



Main Street.

connection with the water by a long, black tube commonly called the head. His mouth is really at the opposite end from the tube, and the water containing the food has to run round the body of the clam before reaching it.

Another clam, not nearly so easy to capture, because it burrows as fast as a man can dig, is the razor clam, long and narrow, with a black shell. He must be got with one quick thrust of the spade, and may be enticed from his sandy burrow by sprinkling salt on the sand.

Shells are quite plenty along the beach. One of the most common is the whitish *Purpura*. This snail gets its food by boring through the shells of barnacles and various shell-fish. From cousins of the *Purpura* the famous ancient dye, Tyrian purple, was obtained. On puncturing the animal a greenish fluid exudes, which changes to purple in the sunshine.

It takes five snails to dye a square inch of cloth, and the ancients obtained the dye by the tedious process of putting the shells into a mortar, crushing them, and mixing the product with water and salt or nitre. So great was the labor of preparing the dye, that in the reign of Augustus one pound of the dyed wool sold for one hundred and seventy-five dollars.

Another snail, *Lunatia*, found along the shore, drills holes in shell-fish by using the small, flinty teeth on its ribbon-like tongue. It is perfectly indifferent as to the object it attacks, not even sparing its own young.

After the snail has died, and its shell lies abandoned on the beach, the hermit-crab, in order to protect its soft body, often takes possession, and carries the shell around on its back. These little crabs are very active and ready to fight one another, but they are also great cowards, and after a preliminary skirmish each combatant is likely to retreat into his shell, and close its opening with his big claws.

There is often quite an active demand for empty shells, when several crabs, which have grown too large for their rented quarters, have to change their houses. Then if two crabs come to the same empty shell, a fight for its possession

often ensues. The house does not serve to protect the little fellow from the hungry fishes, for they swallow Mr. Crab, house and all.

The most interesting things on the Provincetown shore are some whale skeletons, well bleached by the winds and waves. The whale fishery of New England had its beginning at this town, and even though the finback grows less plenty and more shy each year, the chase has not been entirely given up.

The animals were formerly hunted with sailboat and harpoon, but as they became fewer the sailboat got to be too slow, and a few years ago the steamer was substituted. The boat steams up as close as possible to the whale, a bridge is



Provincetown.

thrown out at the bow, and from the end of this two men make the attack. They fire a bomb-lance from a gun and the bomb explodes in the body of the animal and kills it.

Sometimes the whale gets away, oftener still he is not present at all. When shot, the animal sinks, and then the whaler has to watch for him to rise again. This happens when decomposition has generated gases in the body. The carcass is then towed ashore and cut up, and the part not used carried out to sea and abandoned.

In former times larger whales must have come into Provincetown harbor and thereabouts than now appear, for in 1755 Doctor Burchsted rode in his horse and chaise into the mouth of one landed on King's Beach. He afterward had two of its bones used for gate-posts at his house in Lynn.

The custom of decorating front yards with whales' jaws continues in Provincetown. They afford a quaint and inexpensive substitute for flowers in a place where all but the hardiest vegetation has a short and troubled life. Finback bones are plenty at the Cape. At the old, abandoned blubber works at Long Point, there is a ship-load of them waiting to be carried away by curiosity-hunters. A little upholstering will convert a big vertebra into a comfortable stool.

Main Street, Provincetown, follows the sand up the hills and down the hollows, having on one side a narrow plank walk, on the other side often separated from the ocean by a stretch of beach. It is not a paved street; but tramping and liberal use of shells has made it tolerably hard, and smooth enough for the slow driving of the town. Quite a number of shops are scattered along the streets. Those which are not connected with the fishing industries are often general in character, and keep everything from crib to coffin in stock.

Many of the yards of the houses contain flakes, which are long, rough frames on which the salt-fish are spread by the older men every sunny morning to dry. Between these are other yards with boats hauled up in them, and fishing-nets spread out to be mended.

Low carts, with the body hung below the axles of the wheels, are drawn by sober horses through the street; and on the sidewalk the town crier, like the famed one of Nantucket, except that he has a bell, walks slowly along, now and then halting to cry a piece of news or notice of some meeting.

Near the railroad and at other points long wharves stretch seaward; for since, on account of the shallow water, shipping could not get to the town, the town has gone to it.

Sea yarns have a flavor on the coast which they lack farther inland, and the conscience of an old sailor is so elastic when a yarn is being spun that he can make his story exciting and wonderful enough to satisfy the most exacting.

WILLIAM W. NOLEN.

Cape Cod Cranberries.

"Three years ago that land was fit for nothing but to hold the world together," said a prosperous Cape Cod owner, surveying his cranberry marsh with pride, "and now it's worth a thousand dollars an acre."

It does seem as if fairy tales had come true, when unsightly bogs can thus be turned into gold, until one remembers that the means employed are the prosaic ones of time, labor and capital. A marsh is selected in the neighborhood of running water, its tangle of bushes is burned, stumps and roots are removed, and the sods cut and turned over to give a uniform bottom of the rich underlying loam, which is afterward covered with sand from two to six inches deep.

Each bog is then encircled by a low dike of earth, inside which is a ditch, and ditches are cut across it at distances governed by the character of the soil and its consequent demand for a greater or less amount of moisture. Then the ground is ready for planting, and so hardy is the cranberry that this operation can be successfully performed in an apparently reckless manner.

A mass of plants is sometimes run through a hay-cutter, which chops them into bits an inch long, and these are sown broadcast and harrowed into the soil like oats, yet, after such heroic treatment, they live and spread undauntedly.

The most approved method of planting, however, is that of marking off the ground into squares of eighteen inches, by drawing across it a sled having several runners. The cuttings are then dropped at the intersection of these lines, and pressed into the earth with a forked stick.

All winter, and until the early spring, the cranberry meadows are flooded with water, not only to guard the plants against frost, but that insect eggs may be killed, and the fertilizing agencies deposited which are brought by the stream.

Simply constructed gates of wood separate each diked enclosure from its neighbor, and by these the water-supply can be exactly regulated. It is often necessary to raise the water in a meadow while the berries are ripening, for the cranberry is only happy when its roots, imbedded in the rich, peaty soil, are kept moist, while the sand above is dry.

In its third year of growth a cranberry marsh is ready to begin paying for itself, and the picking season usually lasts from the middle of September for about six weeks.

This brings about an odd division of the school year in the cranberry districts. Their summer term is lengthened and the spring vacation cut short, to enable the fall term to begin near the first of November. This is really a matter of necessity rather than of choice with the committee, for should the schools open, not a single pupil would appear except the smallest toddlers, whom the mother would gladly send out of the way, that she might devote herself to cranberry-picking.

Picking time is the carnival season of the Cape. The ordinary business of life is suspended. Houses are closed from early morning till night. Cooking is done in the evening or on rainy days, and beds are merely spread up in time for the tired workers to tumble into them. Flocks of pickers of all ages and sizes settle upon the large cranberry marshes like swarms of locusts.

Even grandfather comes eagerly quavering along, prepared to earn a little money to provide for his daily smoke in the chimney-corner. Fathers and mothers of families depend on the season for supplying many of their every-day needs; and many a pretty girl who would scorn going out to work at any other time, gladly undertakes this back-breaking occupation for the sake of the pin-money it brings.

Every picker dons his or her worst and sometimes most picturesque clothes for the occasion. Old hats and cape bonnets that have, perhaps, hung in the shed or garret the year round, are seized upon as exactly the thing. Stocking-legs are drawn over feminine arms as a defensive armor against

sun and briers. Each picker is furnished with a measure holding six quarts, and the ground is marked off in rows, usually about four feet wide, by cords stretched from pegs.

Often these spaces are varied, as some of the best pickers prefer to work in a division alone ; or a party of three girls, or mother and children, wish to pick together.

A veteran picker is the old lady who appears in the accompanying illustration, and who has allowed her portrait to be used on condition that no lies and nothing scandalous shall be told about her. She is one who has "picked a heap o' berries, one sort or another, got together a good deal o' property, and always paid her minister regular."

Cranberries are not picked like strawberries, daintily and one by one. Experienced workers plunge both hands under the vines, palms upward and fingers curved, and literally scoop up the fruit by handfuls. A rake, which allows the vines to pass through its teeth and retains the berries, is also used, but is far less satisfactory than hand labor.



A Veteran.

When a measure is filled and emptied, the bookkeeper, standing near, gives the picker credit in his account, though tally is sometimes kept by means of tickets, each of which represents a measure, and may be exchanged at the store for tea, sugar or other commodities.

The usual price paid is ten cents a measure, and the laborers, like those in other occupations, have their streaks of discontent.

A few years ago a strike for higher wages occurred on a large marsh where there were five hundred pickers. Fifty of these, preferring a half-loaf to no bread, kept meekly on with their work at the old price, and, sad to relate, the malcontents,

perched comfortably on the dikes as a vantage-ground, pelted them with a shower of sticks and stones. Harmony was finally restored and the strikers went back to work, but, as one old lady among them declared, they looked thereafter upon the fifty righteous as poor-spirited creatures.

"Of course, as they work by the job, there is no chance of cheating," said a visitor to a shrewd proprietor.

"Aint there, though?" he replied, skeptically. "I tell



Picking Cranberries.

you, cranberry-pickers are just like all the rest of the world. Some wouldn't take a berry to save their lives, and others lay awake nights to think how to fill up their measures.

"Some will slyly take a new measure and dent in the bottom, and others have got a way of giving the measures a shake so as to toss the berries up and make five quarts look like six. Human nature is mighty human on a cranberry bog!"

Berry-picking has its champion workers, some of whom average over two hundred quarts a day, and there is a well-supported tradition that one nimble-fingered individual once distinguished himself by picking three hundred and fifty quarts in that length of time.

Such workers show the concentration common to all champions. They seldom speak, but bend over the vines, giving their entire attention to the matter in hand. Even at noon, when the pickers sit about on the grass, eating their dinners from baskets and pails, these more zealous members of the band are unwilling to spare the half or three-quarters of an hour allotted to the meal, but seize a hasty bite and run back to work.

There are certain points of honor to be observed on the meadow, one of which relates to that operation known as picking under the lines. A crafty and overreaching worker may see and covet a goodly growth of berries on his neighbor's preserves; but though it be side by side with his own, he may not, under penalty of remonstrance more forcible than pleasant, reach under for a sly handful. One such offence might be punished and forgiven, but a repetition of it would cause him to be ostracized by his fellows, who would ever after refuse to pick in his neighborhood.

The berries are screened, or separated from leaves and foreign substances, by means of a simple, box-shaped arrangement, presided over by women, or, with the more enterprising owners, by a clumsy-looking but most ingenious machine turned by a crank.

The berries, poured in at the top, are winnowed by a blast of air, and as they fall on a glass surface below, the sound ones are separated from those which are imperfect. The good berries rebound, and hop, of their own accord, upon a revolving belt, which carries them out of the machine, while the imperfect ones drop down into a receptacle prepared for them.

The perfect fruit is then placed in barrels of standard size,

containing one hundred quarts, or in smaller crates, and sent away to market.

Frost-bitten berries have always been utilized for the making of marmalade, but it is only of late that they have also been used for dyeing. Even one who has not seen the color produced can imagine how royally red it would be.

When cranberries are exported, it would be interesting to know if they are often given a reception similar to that accorded by an English gentleman to a barrel sent him by a friend.

"The berries arrived safely," he wrote in return, "but they soured on the passage." The natural inference is that he had attempted to eat them with cream and sugar.

When we are told that a fair yield of cranberries consists of a hundred barrels to the acre, and realize that a fine quality of fruit always finds a ready market, it is easy to understand a farmer's sinking all his capital in a marsh, or embarking with others in a large venture. Of a stock company recently formed for cranberry culture, a shrewd citizen embodies the opinion of his neighbors in declaring, dryly: "Pretty good stock that; 'twon't hurt it any to water it."

ALICE BROWN.



Newport.

It is a curious fact that the smallest state in the Union bears the longest official title, State of Rhode Island and Providence Plantations, and that the same state is the only one of the forty-five to possess two capitals.

In bustling, progressive Providence, conveniently located for the gatherings of the legislators, all the laws are made for the little state, and the executive offices are there. In the antique and also most modern city of Newport, at the lower end of the long island of Rhodes, the government of the state is annually installed.

The dignified old State-house is well worthy of the honor of the new governor's inauguration. Standing in puritanic plainness, it has witnessed the coming and going of governors since 1741, and its history gives a venerating touch to the impressive ceremonies of Inauguration day.

There are several colonial mansions in Newport that, like the State-house, suggest the sober grandeur of the eighteenth century. From these old homes went forth men who gained distinction in letters and in deeds.

In the prim little Touro Park stands a plain granite shaft to the memory of a native of Newport, who in his young manhood won the brilliant victory on Lake Erie that placed the name of Oliver Perry high on the list of American naval heroes.

Another monument of unknown antiquity commands attention in that same Touro Park. It is the Old Stone Mill, the subject of unsatisfactory discussion for many years. Some claim that it is a relic of the eleventh century, erected by the wandering Norseman who attempted a settlement on the Island of Peace.

Yet such a strange structure would, it seems, have attracted the attention of the English settlers, and been named in early

records and letters ; but the earliest mention is in the will of Governor Arnold, who died in 1678, and bequeathed his " Stone-built Windmill."

It is a circular tower, made of rather small, unhewn stones, supported by round arches on stone pillars. On moonlight



The Old Stone Mill.

nights in summer, when the band plays in the park, this unique old structure fascinates the beholder, and suggests to the imagination dreams of the past that fancy weaves into poetic visions indescribable. But it is modern Newport that attracts the American princes and the European ambassadors, the Newport of the last half century, the city of summer-time, of luxury and beauty.

The architect and the engineer have built the palatial villas and constructed the magnificent avenues; the landscape-gardener has beautified the lawns and planted the flowers: but Nature long ago placed there the soft and balmy air, soothing to tired nerves, never harsh with chill or wearying with heat; the most romantic of cliff scenery, with its Paradise and Purgatory, its Spouting Rock and Bathing Beach, its endless view over the ocean's boundless horizon and its charming picture of bay and islands, and the miles of pathway in which no hint of the ocean's proximity is possible.

The tourist, on his first visit to Newport, is always disappointed. He expects to see the magnificent hotels of Saratoga; he finds one modest inn, located so far from the beach that in it there is no suggestion of a watering-place.

He expects to find the beach crowded at the bathing hour; he finds there is no bathing hour, and only a few people are on the beach, except on excursion days. He expects to find innumerable cottages nestling side by side, as at Cottage City; he sees big buildings of varied schools of architecture, some without symmetry or style, buried in the surrounding trees and scattered along the great avenues.

He hopes to see showy crowds of women and men on beach or cliff or park; he sees a few quiet people on street or lawn, till the time for the afternoon drive on the avenue. There, or on the Long Drive to Fort Adams, on band days, he is simply bewildered by the magnificence of the turnouts and the display in the carriages.

If he is so fortunate as to receive an invitation to one of the spreading villas, he finds within the most elaborate furnishings and decorations that perfect taste and unlimited means command. He meets the most graceful ladies and polished gentlemen, and in their presence he realizes the meaning of Newport's high repute. It is the inner life of modern Newport that holds the potent charm over every one who gains an entrance to its society.

MAX OWEN.

A Great Arboretum.

American tree-planting has passed through several stages, each of which has had its practical and its poetic side. When our ancestors came to the eastern coast of North America, they found many more trees than they had use for. They cleared away the forests by axe and fire that they might have the use of the ground; and their inherited fondness for trees, dulled for the time being by the fact that the woods were in their way and sheltered all sorts of enemies, did not lead them to spare many of the forest trees about their dwellings.

They planted a certain number of fruit-trees, which in almost every instance came from the seed of some bit of fruit carefully brought from the old home. The cherishing of these seedlings from the mother country was an interesting and romantic thing; but the trees that grew from them were generally of poor quality.

But when the great forests had ceased to be so terrible, the ineradicable tree-love in the hearts of the descendants of tree-worshipping Gauls and Britons began to assert itself. They planted a few English shade-trees in their dooryards and on the streets; but as a rule, the European trees, adapted to a climate radically unlike ours, languished and died, or made but sorry specimens in maturity.

Then, after our ancestors had been more than a hundred years established upon the continent, they began to feel a love for the native vegetation. In the North they planted many elms and maples, which have grown to great proportions. In the South the live-oak was planted, or was cherished where it had survived or had sprung up. At the same time the useful qualities of our native trees began to be recognized, and people began to cultivate and transplant them. Finally, acquaintance with the vegetation of foreign countries in climate like our own, and the introduction of foreign plants of beauty or value

which will thrive in our soil, have given variety to the shade-trees and shrubbery that now thrive in our parks and lawns.

It is in its relation to the question of the fitness of trees and shrubs for cultivation that the Arnold Arboretum, in Boston, is most useful. This institution, which may be called a living, growing manual of trees and shrubs of the North Temperate Zone, was established chiefly through the bounty of James Arnold, of New Bedford, who, in 1872, bequeathed to Harvard



Arboretum Driveway.

College one hundred thousand dollars to establish an Arboretum, or scientific tree-garden.

The bequest enabled the university to add to the Bussey Institution, a school of agriculture with which it had already been endowed, at Jamaica Plain, within the limits of Boston, such an amount of land that the Arboretum now comprises about one hundred and sixty-four acres.

The Arboretum is far from being a mere nursery, where

trees and shrubs are found growing in rows. There is within its grounds, indeed, a nursery, where labelled plants and trees of every species are cultivated, and where the student may always find, in a little space, every woody plant which will grow out-of-doors in the latitude of southern New England; but this nursery occupies but a corner of the Arboretum.

The object of the place is to cultivate these trees and plants



The Nursery.

under such conditions that they will all assume their characteristic and perfect form, both when they stand alone and when they grow in clumps or thickets. This involves a vastly greater amount of room than nursery cultivation would require.

The surface of the Arboretum is so varied as to provide every sort of tree with the kind of soil and situation that it prefers. The lay of the land has been regarded

in selecting the ground for the different families of trees, subject to their arrangement according to botanical sequence. Here and there noble trees, already standing, have been spared, though they may be out of their proper relation.

Inasmuch as certain large trees thrive best when they have an undergrowth of bushes, they have been accommodated with the thickets which they like best. The thickets give chance for introducing almost everywhere the native flowering shrubs in which the eastern half of North America is so rich. The excellent roads and paths which run through the Arboretum have been lined with these beautiful shrubs, which make the roads appear as if they ran through the margin of a particularly luxuriant forest.

In walking through the tract where the oaks grow, one naturally begins with the big native white oaks of Massachusetts, which are found here in the largest size, because they happened

to be standing here when the Arboretum was started. The white oak does not need an introduction to observant people who live in the United States east of the one-hundredth meridian; but Boston folks have to be introduced to a very familiar friend in the central West, the bur-oak, whose acorns are exceedingly good to eat. They are as sweet in the Arboretum as they are in the marly openings of southern Wisconsin; but the trees have not yet reached that mature and broadly and gnarly spreading stage which makes the bur-oak one of the most eminently climbable trees in the world.

It is a favorite tree wherever it grows, and the people bestow upon it, in certain sections, such pleasant names as the overcup and mossycup oak, on account of the curious burry cup in which its edible acorns grow.

Here one finds European and Asiatic oaks; and the mention of these last brings us by a short cut to a very interesting feature of the Arboretum, the propagating-ground, where the director is cultivating the young trees whose seeds he has brought from Japan.

The northeastern part of Asia has a climate which so much resembles that of eastern North America that its plants and shrubs are usually more hardy here than are those of Europe. To introduce them all to the Arnold Arboretum, and thence to general cultivation as many of them as are beautiful and interesting, the professor made a journey to northern Japan. There he obtained the seeds of a great many trees and shrubs which are scarcely or not at all known in America.

These seeds he brought to the Arboretum and planted them in boxes. The plants are put out as soon as they are large enough and the weather is warm enough. In open frames on the grounds we may see hundreds of little Japanese oaks, birches, hornbeams, maples, alders and magnolias growing, for the professor found in the northern island of Japan a large magnolia which may grow on the frozen hills of New England or the wind-swept plains of the Northwest as thriftily as maples or cottonwoods.

Here is a garden where foreign trees of a little larger size are growing in rows with cabbages and lettuce. They seem entirely at home in this humble company, and benefit by the cultivation which these familiar vegetables get.

They have still another stage of growth to complete before they can be planted out in their proper place in the Arboretum ; and this last stage of growth in the propagating-grounds, where the young trees from all parts of the world stand in rows, is decidedly interesting.



In the Garden.

Every one of these young trees when it goes into its permanent place, has its location definitely marked upon a map of the Arboretum. It has its number, and its history is recorded, the time and manner of its planting, the origin of its seed, and every fact that a botanist, a woodcraftsman or a student would ever want to know.

When the Arboretum is fully planted, it will be not only a complete collection of all the trees and shrubs which will grow in the climate of northeastern America, but a systematized record of the characteristics and capabilities, the strength and the weakness, of each plant for every sort of cultivation.

Add to this the museum of woods and the great tree library on the grounds, which is, no doubt, the best in the world, and we have an idea what a great arboretum may be. It was certainly a noble thought to endow and put into operation such an institution. It looks toward a future of such gardening, park-making and foresting as will not only express the instinctive love of Americans for trees, but realize the magnificent capabilities of our soil and climate.

J. E. CHAMBERLIN.

A Boston Market.

When the first of the sleepy milkmen are going their rounds, and the luxurious man lies fathoms deep in one of his half-dozen morning naps, then the markets which feed great cities are teeming with bustle and interest. If the citizen of Boston who finds a comfortable breakfast on his table is curious to trace its source beyond the kitchen, he may rise at cockcrow, in places where crowing is a daily fashion, and visit the old historic Faneuil Hall Market owned by his city.

He will hardly be among the earliest comers, however, for the wagons of the market-gardeners, laden with fruit and vegetables, often start at nightfall, and sometimes at four o'clock in the afternoon, that they may be at the market betimes next morning.

Many of these men drive in from towns immediately adjoining the city; but some of them come from places thirty-five miles away, seeking short cuts that they may be first at the ferries, and first in reaching their destination and securing standing-ground there.

Arrived at the market, whether at midnight or in the morning darkness, the men arrange their wagons in short, orderly rows beside the great building, so that plenty of space is left in which to drive and walk between the groups. Then the horses are unharnessed and stabled, and the carefully covered wagons left in charge of the night watchmen, who also guard the boxes and barrels left outside the building, while the sleepy drivers find some comfortable corner to drowse in until the moment of action.

With the first peep of light they are back at their posts, and begin to uncover their loads, chatting together, exchanging jokes, and talking over the probable market prices for the day.

Presently appear the picturesque figures of women, with rough, uncovered hair, tattered dresses and faded shawls, each

bearing a capacious basket on one arm. They wander about, hoping to pick up a discarded vegetable here and there, and waiting for the barrels of refuse to be brought out from the stalls within.

When these barrels are deposited on the sidewalk an eager search begins, and the baskets are speedily enriched with



Faneuil Hall Market.

cauliflowers which show the first brown specks of decay, bunches of celery containing one or two perfect stalks, and sweet potatoes partially spongy from age or misfortune.

“Ah! it’s many a fine bit ye can pick up here to put in the soup pot!” calls one woman, glancing at an observer with a knowing look which is almost a wink; and another thrifty

gleaner adds, as she seizes upon a wrinkled turnip, "Five courses I'll have, the day, and if Jimmie buys a bit of liver there'll be six!"

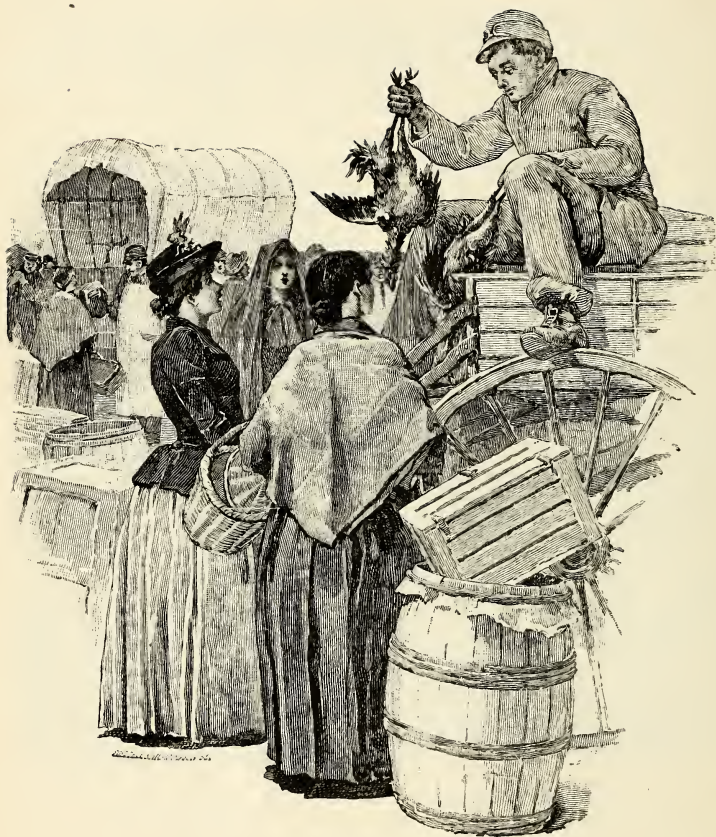
With every increasing ray of light, come wagons from the provision stores and smaller markets of the city, to select from the waiting carts large quantities of the vegetables and fruit needed for their daily sales. The scene becomes animated; the broad street is alive with voices. On Friday, especially, the day when suburban stores send in for their Saturday's stock of provisions, it is difficult to find one's way about among the carts, without jostling eager bargainers.

Perhaps the most interesting season to visit the market is during the summer or early fall, when thousands of berry boxes or great loads of peaches arrive daily. A few firms sell their fruit by auction, and this naturally adds a lively excitement to the scene. Groups of Italian owners of fruit-stands are on the spot betimes. One marketman says of them, "An Italian starts a stand on nothing, but in a month he comes down here and buys whole loads of fruit for cash."

It is in the fall that the market wagons are most delightful to the artistic eye. Pale green cabbages, yellow squashes, piles of celery in varied green, and golden carrots seem actually to light the air.

Meanwhile, as this fruit and vegetable traffic is going on at one side of the market, the meat has arrived on the other, and is rapidly carried into stall and cellar. Great white-covered carts, like emigrant wagons, stand there, packed to the very top with pink and white carcasses; and men adorned by burlap mantles fastened with a skewer are busily tossing them into their destined places.

At sunrise a gong strikes, and the market proper, the great building lined with stalls flanking a central walk, is opened to trade. Then the bustle within is scarcely exceeded by that without. Men hurry about, drawing on their white frocks and overalls, and begin to remove great carcasses of meat from the sacking which has protected them from dust through the night,



Selling from the Carts.

or hang on huge iron hooks the meat which has just been brought in from the storehouses.

One man is assorting his stock of eggs by testing their freshness. A lighted candle is placed in the side of his egg box, and over this he holds each egg for a second, and looks through it, before passing it on into its appropriate place. The degree of clearness shown through the shell indicates, to his practised eye, the probable age of the egg and its state of freshness.

Quite early in the morning come the stewards of the great hotels, to buy their supplies for the day, and then sets in the regular trade; from that of the young housekeeper who wants a steak, but privately wishes she knew tenderloin from porter-house, to that of the boarding-house keeper, who buys in large quantities, expertly selected.

Meantime, while food of all sorts is magically appearing in such profusion, comes a smaller dealer, whose stock is fresh and sweet as the early morning. This is the watercress woman, a slight little creature who comes in tugging a big basket filled with bunches of cress, dark green in its freshness, and dripping with moisture. This she sells by the dozen bunches at the different stalls.

There is something fascinating in the idea of her trade, so connected is it with damp fields and clear, running water.

Then, bringing an odor sweeter than that from "Araby the blest" to those who remember grandmother's garden, comes a young girl with a basket full of the mints, catnip for the kitty, and sage and sweet marjoram.

Outside the market are new phases of interest everywhere. A clear, triumphant sound breaks upon the air. It is the crow of chanticleer, and looking about, after recovering from the first surprise of hearing a barn-yard echo in a city street, one notices several rough coops containing live fowls. Some of these are putting their red-combed heads through the slats, and gazing about in a very inquiring manner, and one is preening her feathers as if to be in gala costume for the sacrifice.

These fowls are bought by the Orthodox Jews, whose religion forbids them to eat meat killed by any but their own sect, and it is no uncommon sight to see a woman walking away from the market, carrying under her arm a lively and very surprised biddy, whose legs have been securely tied together.

But where do the fish-stalls of the market obtain their daily supplies? To find an answer to that question one must walk to the wharf. There boats are coming in laden with the fish, which is bought on the spot by wholesale dealers, and not only supplied to various local markets, but also packed and sent away to other towns and cities.

The wharf itself, rather slimy with fish-drippings, is made lively by men running about with large hand-carts, filled with the fish which they have just obtained from the boats.

The previous process of loading the carts is a rapid and picturesque one. Large baskets of cod or mackerel are filled on board the little boats, swung up and over the side by means of a rope, and dumped into the cart. The man who fills the basket is hardy and sailor-like, clad in a short jacket or a colored jersey, and the motion with which he spears several fish at a time on a small fork is suggestive of the hay-field.

Other boats have come in bringing clams, and these are shovelled into small baskets, dipped in water to be rinsed, and then handed, dripping, to the wharf.

Returning to the market proper, we shall find it full of bustle and interest all day long. The marketmen outside, as soon as their stock is sold, drive homeward, sometimes quite early, but often, on days when trade is slow, not until late in the day.

The market itself closes at five o'clock, except on Saturday night, when it is open until nine. A gong strikes fifteen minutes before the closing hour to warn the keepers of stalls to do their daily cleaning up, and when it strikes again its warning note embodies the old nursery rhyme :

Home again, home again, market is done.

ALICE BROWN.

A Maple-Sugar Camp.

Along in March the people in Vermont, and in other states where the sugar-maple is grown, begin to look for what they call the sugar-snow. While the ground is still white and the river is filled with broken ice, just as the winter is ending and the earth is relaxing from its frosty thralldom, the soft snow that comes helps the flow of sap, and hence it is called the sugar-snow, and is welcomed with much gladness and many preparations. Sugar-snow and sugar-time are among the most delightful experiences in the year to young people in the Green Mountains.

After the outbreak of the Civil War, my father moved from a large town into Vermont, and I shall never forget the excitement which prevailed among us when he announced one day that work would then begin in the sugar-place.

There were four of us, or, counting Tray, the dog, five; and I don't see why Tray should not be counted, for he took as much interest in the proceedings as any of us, and long afterward the words "Sugar-place!" would always rouse him from the deepest slumbers. Only one other word ever had the same effect upon him, and that was "Woodchucks!"

The first work in a sugar-camp is to scatter the buckets. The farmer goes to each tree with his bit, and bores one, two or three holes through the bark. Into each hole he inserts a wooden or galvanized-iron spout, through which the sap flows into the buckets suspended below it. Thirty years ago the buckets and spouts were all of wood, but they have been superseded by tin and galvanized iron, which are cleaner and more economical.

The work of tapping is not easy, as the snow is usually very deep when it is done. A large sugar-place in Vermont, where a great amount of maple-sugar is made, contains from one thousand to three thousand trees, and a place with less

than three hundred trees is called a small one. If the weather is favorable, that is, when the days are warm and the nights frosty, the buckets attached to the trees first tapped are filled before the last ones have been bored, and their contents must be boiled at once. The flow is sometimes so copious that the men have to work night and day to prevent loss.

The sap is gathered by a man or boy who goes to the buckets and empties them into large pails suspended from a sap-yoke which he wears on his shoulders.

When there is a good crust over the snow to hold him up, this work in the bright morning, with the bluest of skies above, is not unpleasant, but when the orchard is large, and the snow deep and soft, and he has been toiling through the day and into the darkening night, attending to the steady drip, drip, drip in the overflowing buckets, he is apt to think that sugar-time is not so jolly after all.



Gathering Sap.

Perhaps, too, he does not feel well from having tasted the sap too often. It is so delicious as it comes fresh from the tree that it is a wonder if he does not drink too much of it. Sometimes the boy is relieved by having a team of horses and a sled, on which a tub is placed to receive the contents of the buckets.

While the sap is being gathered the boiling must be kept up continuously. In the days of wooden spouts and buckets the sugar was made in a great iron caldron, suspended by chains over a fire in the open air. As the fire burned and the caldron bubbled, the winds made free contributions of dirt, twigs, sand and smoke, which did not tend to improve the

flavor of the sugar. Probably most of the sugar made in Vermont would hardly be marketable to-day if it were made in this way.

Now sugar-houses are built, containing brick or stone arches, with sheet-iron pans, or evaporators, in which the sugar is boiled. Being kept from contact with anything which is not strictly clean, it is purer and of finer grain and lighter



A Maple Sugar House.

color than it used to be. When the sap has been boiled until the water has nearly all passed out of it in the steam, it is strained and then rapidly boiled until it grains or hardens or changes from syrup to sugar.

The work of sugaring off in the old caldron made a red-letter day for the children. Provided with a spoon and

saucer, or a wooden paddle made especially for warm sugar, each boy and girl would set out over snow-drifts much higher than their heads, and when the sugar was nearly done and would lie on snow, the fun began in good earnest.

Filling their saucers with the sugar, they repaired to the nearest clean snow and spread the sugar over it to cool before they ate it. There was more merriment than at any candy-pulling, and it sometimes happened that all of the farmer's family were encamped in the woods to help in the work.

On one occasion old Tray learned a lesson he never forgot. Always ready to take any sugar offered him, he evidently considered that he had not been treated often enough, and took matters in his own — paws.

I had just dropped a lot of the hot sugar on the snow, and while waiting for it to cool had turned my back. The temptation was too much for dog-nature, and like the Jackdaw of Rheims, "While no one was looking, Tray stepped up and twigged it."

When his teeth shut firmly down on the hardened wax, as the sugar was called, he could not open his mouth again. He scraped with his paws, ran round and round, and rolled over and over, but no relief came; and worst of all, his most intimate and loved companions stood laughing at his misfortune. He could only sit up and wait for his lockjaw to melt. Never after that would he eat the before coveted wax, and he always showed that he took it as an insult to have it offered to him.

When I went to the old schoolhouse of our district, I was proud to find in my geography that Vermont produced more maple-sugar than any other state in the Union.

Some few farmers, instead of making the sugar, make delicious maple-honey, and, sealing it up in bottles, send it to the great hotels in the cities. One way or another a farmer with a large sugar-place in Vermont makes a good deal of money from it every year.

RUTH RUSS.

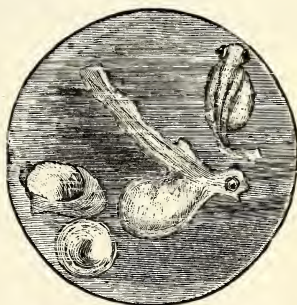
A New Hampshire Fish-Farm.

Fish-farming, or the breeding of fish by artificial means, is a comparatively new industry, and as the reader probably knows, its object is the stocking of rivers with salmon and trout. Early attention was given to it in New Hampshire, and there was opened a free passage from the ocean to the very heart of the Franconia Mountains through the Merrimac and the Pemigewasset Rivers.

Fishways have been constructed in these rivers to enable the fish to ascend. A fishway is a spout or aqueduct designed to overcome the steep ascent from the head of a dam to the bed of a river which would baffle the fish in its progress, and it is so divided by partitions that the pilgrim from the ocean can make his upward journey and rest from time to time in favoring eddies instead of being exhausted in a struggle with the abrupt fall. There is an excellent reason for helping him on his way as much as possible.

Salmon begin to ascend the streams about the first of June, and they make a holiday of the summer, sporting in the eddies and shady nooks, and playing in the rapids. Late in the autumn when they are paired, each couple selects some spot in the coarse sand or gravelly bottom, and in a hole therein the female deposits her eggs. The male hovers about the spot and helps her in covering the eggs with sand and gravel to a depth of six to ten inches.

This operation being complete, the happy couple return to their winter quarters in the ocean, leaving their progeny to hatch, wriggle and wash out of the nursery as best they may.



Young Salmon.

In the natural process very large numbers of eggs are destroyed by various causes, and probably not more than fifteen per cent. of them come to life; but by the artificial process, the New Hampshire Fish Commission has for a series of years obtained from ninety to ninety-five per cent.

In connection with the hatchery is a trout-pond for the preservation of breeders, and a pond for the reception of salmon taken while on their way to the mountains. A kind of trap



In a Salmon Weir.

called a weir is made of poles, brush and netting, from which the salmon are scooped out with hand-nets, and carried in boats made for the purpose, to the breeding ponds.

Late in autumn, the fish that have been captured during the summer season and held prisoners in the reception pond are closely watched to ascertain when they are ready to spawn. As soon as detected in the natural process of preparing a bed in which to deposit eggs, they are carefully taken by means of a net, and when their eggs have been secured, they are turned loose in the river to make their way back to salt water.

The hatching-house is a comparatively inexpensive building; it is long, low-studded and double-walled, the space between

the two walls being packed with sawdust to prevent the water inside from freezing.

The water is brought in a large iron pipe from a spring, and distributed to each of the six hatching-troughs by faucets, which regulate the supply. The troughs are ten inches wide by six deep, extending nearly the entire length of the building; and they are arranged on trestles to allow the water to flow with a gentle current from the upper end to the lower, and thence off into a waste-pipe.

In each trough is a series of hatching-boxes, which may be described as square, shallow sieves, made by fastening small wire screens for a bottom, to a frame a foot long, and wide enough to just fill the trough crosswise. A free current of water flows through the sieves over, under and among the eggs, which are deposited and spread upon the wire screens.

The eggs are spherical in shape, nearly the size of a common pea, of a delicate pink color, and transparent enough to show the eyes of the embryo salmon. About three months' time is required for hatching them.

Of all frail forms of life, the young salmon, just hatched, exceeds in interest anything the writer remembers having seen. A casual observer would notice the cast-off shells, and would think he also saw as many eggs as before. What appear to be eggs are, in fact, yolk sacks, or in other words, provision bags, with the outer shell cast off, each sack with its little salmon attached just below and behind where the gills are to be.

Looking sharp we detect two little black specks with a hair line extending from between them, for half an inch or so. These little black specks and the hair line are the eyes and the backbone of a salmon, which in the course of eight years, perhaps, if nothing befalls, will weigh twenty-five pounds, and measure three feet in length.

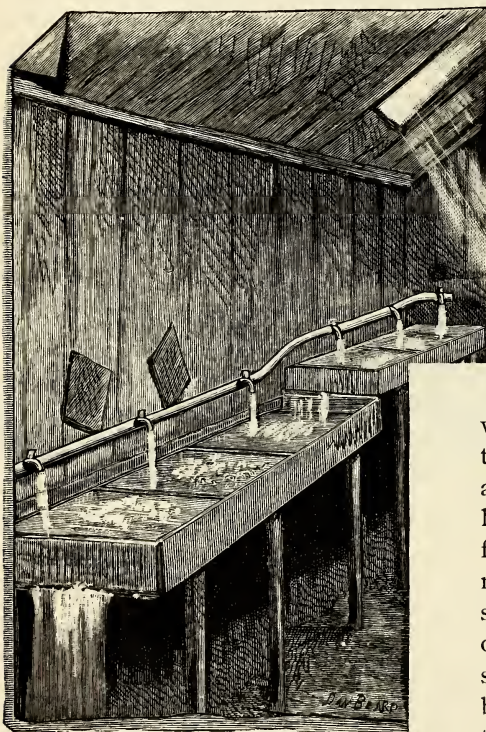
This extremely slight trace of creation is enveloped in a body of liquid so transparent and perfectly clear that in the space of a few days a complete set of ribs can be seen starting out from the backbone and gradually gathering into the form

of a fish. In the course of a week something like a head and tail appear and the thing begins to wriggle.

It has not yet got strength to move its yolk sack, which remains exactly where it was when hatched. By and by the transparent liquid, which encloses the lively little framework,

begins to have a cloudy look along the backbone, and by a tremendous wriggle, the embryo succeeds in starting its yolk sack just a hair's breadth. Then it takes a rest, and wriggles again, making another advance.

During the second week it develops rapidly, the sack growing smaller and the fish larger. The liquid has hidden the framework from sight now, and is gradually solidifying. At the end of three weeks the yolk sack is all absorbed in the body, and it is time for the perfect little creature to get its nourishment



The Hatching-Troughs.

from the surrounding element, the water. The young salmon are now considered capable of caring for themselves, and are turned loose in the river, or conveyed to such other streams as it is thought desirable to stock.

M. HAWKS.

Among the Pines.

Maine has been very properly called the Pine Tree State, for it is in her almost exhaustless pine forests that she finds one of her sources of wealth and commercial importance. Although spruce and hemlock have been gradually taking the place of the pine in the lumber trade, yet there are still vast, unexplored tracts stretching far away toward Canada, where this noble tree still flourishes in all its old-time grandeur and luxuriance. Early in the fall, sometimes by the first or middle of October, the advance guards of the lumber crews, each consisting of some half a dozen men, start for the forests where their employers' claims are situated.

They select a place as near as possible to one of the small streams that thread this vast lumber region in every direction, and build the camp that is to serve them and their comrades for a shelter during the long, cold winter that is at hand.

A hut, proportioned to the size of the crew that is to occupy it, is built of large logs, carefully notched and fitted at the corners, and chinked with moss and clay. A stone fireplace is built in one corner, and bunks for the men are placed against the wall and filled with the fragrant tips of pine boughs to serve as beds.

The roof is made of long, split shingles, fastened down with long poles instead of being nailed, and finally covered with spruce boughs, which, after the first fall of snow, keep out the wind and frosts very effectually. The earlier camps used to have only the hard-trodden earth for floors, and their inmates got along without such conveniences as tables, plates, etc., but now they are provided not only with plank floors, but a table with a suitable supply of crockery is in most cases provided, as part of the woodman's necessary outfit.

Near the hut of the loggers another is constructed with much care, to make it as comfortable as possible for the dumb

companions of their winter's toil, the patient, plodding oxen or the quicker horses. By the time everything is ready for their reception the tote teams make their appearance with the cattle and the supply of food that is to serve them all during the winter. Flour, pork, beans, molasses and tea are the staples.

Sometimes a barrel of corned beef finds its way into the camp, but as a rule the diet of the men consists of hot flour bread, with pork fat for a relish, and tea without milk, sweetened with molasses.

These, with the indispensable dish of baked beans, cooked to perfection in a bean-hole dug in the earth and lined with hot stones, form luxurious fare to appetites sharpened by hard work in the cold, frosty air of midwinter.

Sometimes a lucky shot may bring down a moose, or an equally lucky find may put them in possession of enough bear-meat to make every day a feast-day for a week or two. The fat of the bear is said to be very delicate and sweet to the taste, and is much prized by hunters and lumbermen. In it they fry their favorite dainty, the Yankee doughnuts.

A crew generally consists of a boss, who takes the charge of affairs, allots the work and sees that it is faithfully performed by the choppers, swampers, teamster and cook.

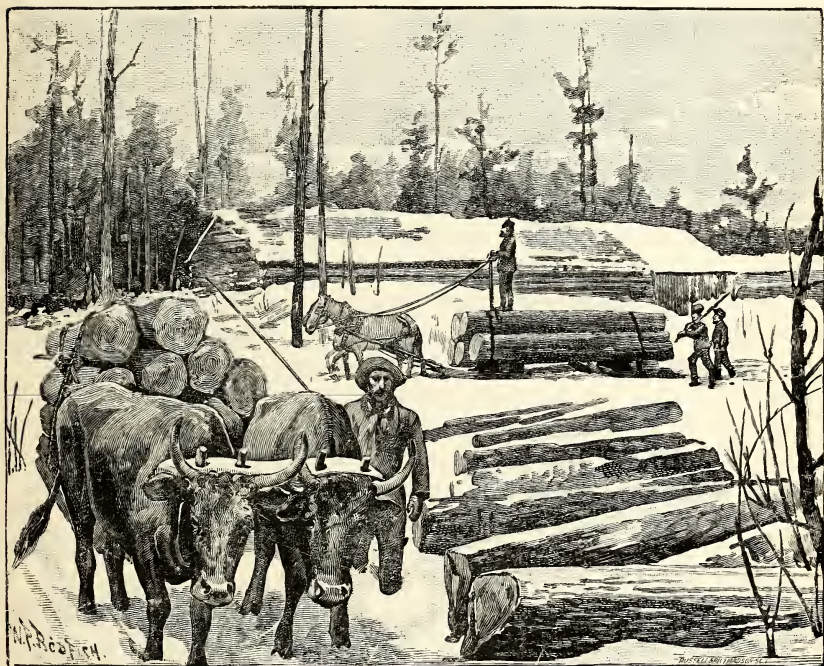
The boss decides upon the best place to commence operations, and then all hands clear a road from that spot to the stream, so that when the snow comes there will be a comparatively smooth and level roadway for the teams to drag their ponderous loads over during the winter.

Commencing his work with the earliest gleams of daylight, the sturdy, strong-armed chopper plies his axe, stopping only for a hasty dinner at twelve, until the ghostly shadows of twilight fall upon him from between the dusky tree-trunks, and the evening star, far above in the blue, wintry sky, seems resting like a glowing gem upon the topmost spire of the giant pine above his head.

Then the weary worker turns his steps campward, where a blazing fire and a hot supper soon make him forget the cold

and fatigue of the day ; while in the companionship of his mates he finds the mental stimulus that binds him to the half-forgotten world outside his own forest solitudes.

Besides the hard work, there is always more or less danger in felling these mighty trees. The experienced chopper can



A Camp in Winter.

easily detect by the motion of the swaying trunk in what direction it is about to fall, and he makes his retreat accordingly ; but as the enormous branches go crashing down through the tops of the smaller trees, they are often broken and hurled through the air, crushing whatever lies in their track, occasionally wounding and sometimes killing the

luckless chopper, whose skill in woodcraft proved insufficient to shield him from this unexpected danger.

The tallest trees are usually sawed at the landing into logs of a convenient length for the drive, which begins as soon as the spring sun has acquired power to melt the immense masses of snow and ice that cover the hillsides. Then every little brook is swelled to a raging torrent, into whose eager embrace the logs are hurried, and the perilous and exciting work of the river-driver begins.

From lakes and tributary streams the logs are driven into the main river, where they form one indistinguishable mass called the main drive. The different crews now vie with each other in deeds of agility and daring, and it is wonderful to note the skill and promptness with which these men, scorning danger and discomfort, manage to keep those millions of rolling logs in the main channel of the river.

Without a dry thread of clothing for many days and nights in succession, the river-driver knows neither rest by day nor ease by night.

Sometimes the boat containing the supplies fails to reach the stopping-place for the night in advance of the crew, and then the poor fellows, cold and wet as they are, must lie down hungry and shelterless upon the bare ground, to snatch such rest as they may find in their comfortless quarters.

With the soles of his boots armed with sharp spikes to keep him from slipping on the wet, smooth logs, and a setting-pole, with which to guide them and steady his own steps, the river-driver considers himself fairly equipped for the toils and dangers awaiting him.

In a narrow channel between high banks, or at the head of a fall, the logs are apt to form what is called a jam, that is, one or more logs chance to strike across the stream in such a way as to obstruct the passage, so that those pressing on behind, unable to pass, are piled high one above another in the most inextricable confusion.

To break one of these jams is a difficult and almost always

dangerous task, as the operator must in many cases cut away with his axe one or more of the obstructing logs, thus letting the whole mighty mass loose in an instant, and giving him little time to escape from the terrible onslaught.

Sometimes when the banks are high and the channel very narrow, it is necessary to let a man down from the top by a rope to perform the dangerous task; and if he escapes with only a few bruises and scratches he may consider himself very fortunate, since the parting of the rope, or the failure of his comrades to draw him up at the very instant that the jam starts, might be death swift and sure, without any possibility of rescue.

When at length the logs reach their destination they are enclosed in a boom. This is simply a floating fence of large logs, fastened together so strongly that their wild brethren, fresh from the forests, cannot escape from their restraining arms.

And now it is the duty of the boom-master to see that each owner has his own logs assigned to him fairly and justly. Every man's logs are marked by some kind of hieroglyphic cut deep into each log by the axe of the loader.

If any log, either by carelessness or accident, has reached the boom unmarked, it becomes the property of the boom-master, who is also entitled to a certain proportion of the lumber, as his share for the care and labor of harborage and distribution of the whole.

It seems a tame ending to all this wild turmoil, this dumb exhibition of unloosened savagery, to see the poor logs at last floating meekly down to the sawmills, where

Steam, the slave, shall tear them with his teeth of steel, carve them into plain, commonplace boards and staves, that shall, in time, lose even the fragrant breath that alone reminds one of their forest origin, and hidden beneath a coat of paint and varnish, make comfortable or beautify the homes of civilization.

MRS. H. G. ROWE.

A Winter Harvest.

The traveller who, on a pleasant midsummer day, ascends the Kennebec River in Maine for the first time, is likely to be much interested in the signs, which appear as soon as his boat has passed from salt water into fresh, of a great industry which evidently surpasses all others in importance thereabout.

At frequent intervals upon the Kennebec are seen great wooden structures. Some of these have wide-spreading gambrel or curb roofs, and are picturesque objects in the landscape; others are simply vast barracks of rough planks and boards, unpleasant and disfiguring to the shores of the broad river. All of these are ice-houses, and they are the depositaries of the great ice-harvest of the Kennebec.

In midsummer, scarcely less than in the latter half of winter, these great houses are a scene of activity. Schooners are brought to their very doors by tugs, and there are seen lading with great blocks of clear, blackish-green ice. From each of the ice-houses a long and slightly inclined plane leads down to the light wooden wharf where the vessel lies; and down this smooth incline a continuous line of blocks of ice, urged on by men and boys with picks, is descending.

The Kennebec River is a great centre of the ice-cutting business because, joined with a snug winter climate which makes ice a tolerably sure crop, it has a great stretch of navigable fresh water. Clear ice may be cut here over the very spot where ocean vessels may moor the next summer and load it, to be taken directly to the cities on the coast farther south.

Perhaps the business of harvesting ice on a great Maine river comes nearer to the fabled plucking of apples of gold from the trees in the garden of the Hesperides than anything else in modern practical industry. The ice, to begin with, is Nature's gift to everybody. There is no property in it, no

ownership of it by any one, until it has been marked out to cut; and any one may do that, and possess the ice, if he is able to cut it afterward.

But this free gift of Nature brings to the inhabitants of the Kennebec River, along the twenty-five miles from Augusta, where there is a dam, down below the foot of Swan Island, where the water begins to be brackish, a yearly income of from



Loading the Ice-Schooner.

one to four millions of dollars, according to the price for which they sell their crop of a million to a million and a half tons of ice.

To the Kennebecker, therefore, the winter is the real harvest-time. That is the season when fortunes are most readily acquired by the enterprising, and employment most easily found by those who need it.

An ice-claim must be marked out anew each year, and preëmpted over again as often as the ice melts away. On the Kennebec, as soon as the ice is strong enough to bear a man, the claim is staked out by setting bushes or stakes in the ice, or often, where it is very systematically done, by setting in joists with boards nailed across them.

The construction of an ice-house on the bank carries with it, in practice, the right to cut the ice on the river in front of it; and as the ice could not be secured without an ice-house in which to store it, only those who are able to get a foothold on the land can gather the ice-harvest, theoretically free to all.

There is nothing to do, after the claim is marked out, until the ice has become thick enough to carry a horse, so that the snow may be scraped off as fast as it falls. Ice will not make rapidly under snow, and will not attain its full thickness. The iceman's most anxious time is when there is danger of a snowfall on the ice before it is strong enough to bear horses to scrape it.

If the snow steals a march on the scrapers in this way, it is often necessary to get rid of it by a very laborious and expensive process. A hole is cut through the ice, and the snow saturated with water. When this freezes the ice will bear a horse; but the worthless snow-ice thus formed must be planed off, also by horse-power, with a planer made for the purpose. The scraping and planing is called cultivating the ice, and it is generally a very expensive sort of cultivation. A single night may cause the icemen an expense of five or six thousand dollars in the cost of the removal of a heavy snowfall.

The iceman's crop is nearly ripe when clear ice has formed to a thickness of twelve inches, and then the preparations are made for the harvest.

From the point on the shore where the elevator leading to the ice-house reaches the brink, a canal from five to twenty feet wide, according to the magnitude of the business, is opened out into the river, through which the blocks of ice are presently to be floated to the house.

It must be kept clear as long as the ice-harvest continues, no matter how many degrees below zero the mercury may fall. In the day, the constant moving of ice-blocks through the water suffices to keep the channel open. At night, in freezing weather, the necessity gives rise to one of the coldest and most lonesome occupations that one can imagine.

Armed with a great triangle of heavy pieces of wood, which he drags through the water, a man marches up and down the channel all night long, crushing and scattering the thin sheets of ice with his triangle as fast as they form. The workman to whom this cheerless task falls must be heartily glad that the gray wolves no longer make the frozen Kennebec a thoroughfare.

With the opening of the canal comes an interesting result at once. The thickness of the ice is increased by the exposure



The Harvest in Progress.

of the water and the cooling of its surface. The cold is let into the river, as it were, both below and above the cut. By the time all this has been done, the middle of January has generally been reached. The date varies, of course, with the season.

The ice has now a thickness of from twelve to eighteen inches. Sometimes it is even thicker than that; but a thickness of more than eighteen inches is a disadvantage, because it renders the blocks of ice hard to bar off from the field. Now the field is carefully marked off, with a grooving machine drawn by a horse, into regular parallelograms, which are generally twenty-two by thirty inches square, the size which the individual blocks of ice are to have.

The ice-field, unlike other fields, is cultivated before it is plowed. It is only now, when the marker has grooved the ice across and across, that the ice-plow is brought, or rather that several ice-plows are brought, for several go over the same ground in succession.

A plow which cuts to a depth of six inches first follows the marker's grooves. Then comes another, which cuts two inches deeper, and then another, cutting still deeper, and so on until the trenches have been carried so deep that the blocks of ice may be barred off or loosened from the field.

Beginning at the outermost end of the canal, and working out at right angles with it as far as the field has been marked, the workmen break off, with a heavy wedge-shaped instrument called a bursting bar, sheets or sections of blocks of ice, making a new channel running off from the original canal.

Through this channel the sheets of ice are forced, by means of hooks, to the main canal, and thence to the foot of the elevator which runs to the ice-house.

At this point a narrow bridge of planks is thrown across the canal, upon which is posted a man armed with an iron bar. Standing with his face toward the shore, this man separates the sheets of ice into single blocks, with quick blows of his bar, as they float beneath him.

With a quick push this man thrusts each block over revolving chains upon the elevator. These chains are provided with lags or straight bars of wood, and the block is drawn up the inclined plane into the ice-house by the continual movement of the elevator.

There is here an ingenious but very simple arrangement by means of which the blocks of ice are left at the proper place. At the level of the floor of the ice-house is a pocket or open space in the floor of the elevator, through which the ice passes. When it is desired to carry the cakes higher, the pocket or hole is closed with boards, and the ice intelligently keeps on to the next pocket above.

In the house, the blocks of ice are placed close together on

their sides, and left three or four inches apart at the ends, so that they will not freeze together with the melting and freezing to come.

The crop is harvested now ; and if the iceman has had a fairly fortunate season, he has garnered at least a thousand tons to the acre. Not unfrequently the crop reaches thirteen hundred tons to the acre.

The river is at its busiest in February, but the opening of navigation brings another busy season. All summer long schooners and barges, under tow, ply up and down, lading at the ice-wharves. The blocks of ice are sent down the runway to the vessel's side, and there lowered into her hold.

Machinery is used here, too, as far as possible. A lowering winch is placed at the hatchway of the vessel, and the ice is lowered by the aid of ropes and pulleys. The workers in the ice-harvest are frequently farmers and their sons from the country lying back from the river. Often the ice-workers are engaged in the sawmills in the summer season.

A man who is industriously disposed may manage to work pretty hard the year round on the Kennebec. So may a horse, for that matter, for the same animal that pulls the scraper and the ice-plow pulls the land-plow, the harrow and the mowing-machine later on. But continuous industry seems to be congenial, both to men and to animals, in the stimulating climate of Maine.

Thus a crop which costs nothing for seed, nothing for the ground to raise it upon and nothing to fertilize, but a good deal to cultivate and still more to harvest, becomes a source of wealth to many, and of profitable employment to many more.

J. E. CHAMBERLIN.

Moose-Calling.

The moose is a noble beast, and any form of honest hunting for him through the deep solitudes of the north woods is full of keen interest and enjoyment. But moose-calling stands alone in the hunter's mind, the most exciting, the most disappointing, the most dangerous method of hunting in New England.

Other forms of hunting moose are more attractive in many ways, but I doubt if the hunter's nerves ever again thrill with quite the same sensations that swept over him that first night when he stood by a little opening in the forest, with the solitude and utter loneliness of the wilderness about him, and heard the deep silence suddenly broken by an angry roar, and then the crashing advance of the great ugly brute rushing straight down upon him out of the dark woods.

Tracking through the first snows requires strength and patience and cunning; and one has, beside the excitement of the hunt, the beauty of the winter woods, and the peace and restfulness of the night-camp. Tracking is warmer and much more comfortable every way than waiting perfectly motionless, without daring even to swing the fingers or stamp the toes, out of which the autumn frost is slowly chilling the life; but it lacks the tremendous impressiveness of the night, and the swift, fierce thrill of the bull's answer and his savage rush.

The same may be said of still-hunting, or creeping, as the Indians call it. In tracking or still-hunting one is following a timid animal that, unless wounded or headed, dashes off in a swinging trot at the first sniff of danger.

When moose begin to mate in September, an old bull grows savage and uncertain of temper; it is never safe, day or night, to approach him carelessly. The call may only alarm him, and send him off into deeper solitudes; but it is just as likely to throw him into a rage that brings him crashing down to attack at sight the first living thing that opposes him.

And so there is always the added charm of uncertainty and danger about it. As for torching and crusting and murdering the poor animals in their yards, where deep snows have imprisoned them, after taking their portraits with a kodak, as so-called sportsmen do nowadays, they are abominable, all of them. No decent hunter, unless driven by hunger, will have part or parcel with those who use them.

The call of the cow moose, which the hunter always uses first, is a low, sudden bellow, quite impossible to describe accurately. It breaks out of the woods and is gone so suddenly as to leave one simply surprised, with no accurate impressions. Before hearing it I had frequently asked Indians and hunters what it was like; the answers were rather unsatisfactory. Like a tree falling, like a cow, like the swell of a cataract or the rapids at night, like a rifle-shot, or a man shouting—these were some of the answers, till one supposed it must sound something like a menagerie at feeding-time.

One night, as I sat with my friend before our bark tent eating our belated supper in tired silence, while the rush of the salmon pool near and the sougling of the wind among the spruce tops were making our eyelids heavy as we ate, a sound suddenly filled the forest and was gone. Strangely enough, we pronounced the word "Moose!" together, though neither of us had ever heard the sound before.

Like a gun in a fog might, perhaps, head the list of similes, though after hearing the sound several times, I am still at a loss to describe it. No two animals ever bellow precisely alike, and the thick trees break up the vibrations, making the sound still more vague, which accounts, perhaps, for the variety of description. A single low, indefinite bellow is heard early in the mating season. Later it is more prolonged and definite, and often repeated twice in quick succession.

The best hunter I ever met used a short and abrupt call, uttered with the accent at the end, and a quick roll of his head as he uttered it. After a second's interval he repeated it, slightly prolonged, with a slower roll of the head. Two

seconds after, with the trumpet's mouth close to the ground, he began a plaintive, pleading bellow long drawn out, while the trumpet-mouth described three wide circles in the air, ending abruptly without accent. If no answer came, a half-hour passed before the call was repeated.

Though his call was often successful, I confess it never



Moose-Calling.

sounded to me much like that of a moose. Perhaps had I been farther away, with a vivid imagination and in ignorance of the hunter's wiles, I, too, might have been deceived. The answer of the bull varies but little, and is easy to imitate. It is a short, hoarse, grunting roar, frightfully ugly when close at hand, leaving no doubt as to the mood he is in.

Sometimes, when a bull is shy, and the hunter thinks him to be near and listening, he follows the call of the cow by the short roar of the bull, at the same time snapping the sticks under his feet and thrashing the bushes with his trumpet. Then, if the bull answers, look out. Jealous and ready to fight, the beast hurls himself out of his concealment, and rushes in like a tempest to meet his rival.

Once aroused in this way he heeds no danger ; and the eye must be clear and the muscles steady to stop him surely ere he reaches the thicket where the hunter is concealed. Moonlight is poor stuff to shoot by at best, and an enraged bull moose is a very big and a very ugly customer. It is a poor thicket, therefore, that does not have at least one tree with conveniently low branches.

The trumpet with which the calling is done is simply a piece of birch-bark, rolled into the shape of a cone, with the smooth side within. It is fifteen or sixteen inches long, about four inches in diameter at the larger and one inch at the smaller end. The right hand is folded round the small end for a mouthpiece ; into this the caller grunts and roars and bellows, at the same time swinging the trumpet's mouth in sweeping curves to imitate the peculiar roll of the cow's call.

If the bull is near and suspicious, the sound is deadened by holding the mouth of the trumpet close to the ground ; this, to me, imitates the real sound more closely than any other attempt. So many conditions must be met for successful calling, and so warily does a bull approach, that unless far back from civilization the chances are strongly against the hunter's ever seeing his game. The old bulls are shy from much hunting ; the younger ones fear the wrath of an older rival.

The calling season begins early in September and lasts six or seven weeks. In this season a perfectly still night is the first requisite. The bull, when he hears the call, will approach silently within an hundred yards. It is simply wonderful how noiselessly the great brute can move through the thick woods.

Then he makes a wide circuit till he has gone completely round the spot where he heard the call, and if there is the slightest breeze he scents the danger and is off on the instant.

On a still night his big, trumpet-shaped ears are marvelously acute, and only absolute silence on the hunter's part can insure success. Another condition quite as essential is moonlight. The moose often calls just before dusk and before sunrise, but the bull is more wary at such times and can seldom be called into the open.

By far the best place for calling, if one is in a moose country, is from a canoe on some quiet lake or river, between two open shores if possible. On whichever side the bull answers, the canoe can then be backed silently into the shadow of the opposite bank.

If there is no water near the hunting-ground, then a thicket in the midst of an opening in the forest is the only suitable spot from which to call. Such spots are rare except about the barrens, which are open, treeless plains scattered here and there throughout the great northern wilderness. Here the hunter collects a thick, dry nest at sundown, and spreads the warm blanket that he has carried on his back all the weary way from camp; without it the cold would be unendurable after three or four hours of silent waiting.

When a bull answers a call from such a spot he will generally circle the barren just within the edge of surrounding forest, and unless enraged by jealousy will rarely venture into the open. He is a creature of the thick woods; never at ease unless within quick reach of their protection.

An exciting incident happened to Alek, my Indian guide, one autumn while hunting on one of these barrens with a sportsman whom he was guiding. He was calling one night from a thicket near the middle of a narrow barren. No answer came, though for an hour or more he felt quite sure that a bull was near and listening. He was about to try the roar of the bull, when the creature suddenly burst out of the woods behind the two men, in exactly the opposite quarter from that which

they were watching, and in which they believed their game to be hidden.

Alek started to creep across the thicket, but on the instant a second challenge rang out fiercely in front of them, and directly across the open they saw the underbrush sway violently, as the bull they had long suspected broke out in a towering rage, grunting and grinding his teeth, and thrashing the bushes with his big antlers.

He was slow in advancing, however, and Alek crept rapidly



A Bull Moose and Herd.

to the other side of the thicket, where, a moment later, his excited hiss called his companion. From the opposite fringe of forest the second bull had hurled himself out, and was plunging with savage roars straight toward them.

Crouching low among the firs, they awaited his headlong rush, not without many a startled glance backward, and a very uncomfortable sense of being trapped and frightened, as Alek confessed to me in confidence. He had left his gun in camp; his employer had insisted upon it in his eagerness to kill the moose himself.

The bull had come rapidly within rifle-shot. In a minute more he would be in the thicket, and already the rifle-sight was trying to cover a vital spot, when right behind them, at the thicket's edge it seemed, a frightful roar and a furious pounding of hoofs brought them to their feet with a bound.

A second later the rifle was lying among the bushes, and a frightened hunter was scratching and smashing in a desperate hurry up among the branches of a low spruce, as if only the tip-top were half high enough. Alek was nowhere to be seen, unless one had the eyes of an owl to find him down among the roots of a big windfall.

But the first moose smashed straight through the thicket without looking up or down, and out on the barren a tremendous struggle began. There was a few minutes' confused uproar, of savage grunts, grinding teeth, pounding hoofs and clashing antlers, with a hoarse undertone of labored breathing. Then the excitement of the fight was too strong to be resisted, and a dark form wriggled out from among the roots, to look at the struggling brutes not thirty feet away.

Three times Alek hissed for the white man employer to come down, but that gentleman was safe astride the highest branch that would bear his weight, with no desire evidently for a better view of the fight.

Then Alek found the rifle among the bushes, and waiting till the bulls backed away for one of their furious charges, he brought the larger one to his knees with a bullet through the shoulders. The second stood startled an instant, with raised head and muscles quivering, then dashed away across the barren and into the forest.

Such encounters are often numbered among the tragedies of the great wilderness. In tramping through the forest one sometimes finds two sets of huge antlers locked firmly together, and scattered about among the underbrush white bones picked clean by wildcats and prowling foxes. It needs no written record to tell their story.

WILLIAM J. LONG.

Fox-Hunting in New England.

The health-giving, all-day hunt of a fox on his native hills, as free and nearly as fleet as the wind, is a sport which is still popular in some parts of New England, and one which is in a high degree calculated to develop the endurance, wariness and patience which go to make a true sportsman. Though not every day's hunt is successful in the securing of Reynard's brush, there is rarely a day when one cannot be started, and keen is the satisfaction when he falls to the tireless trailing of the hounds, and the patience, good judgment and accurate aim of the hunter.

Each sportsman has one or two hounds which he keeps for an occasional hunt, and from one to five or six hounds are ordinarily used. They are strong, well-made dogs of great courage and endurance, ready and willing to follow a started fox from twelve to thirty-six hours, unless in his flight he sooner comes within reach of the ambushed gun. They are also keen of scent and intelligent enough to understand the many methods used by the fox to baffle them in their pursuit, and to throw them off the trail.

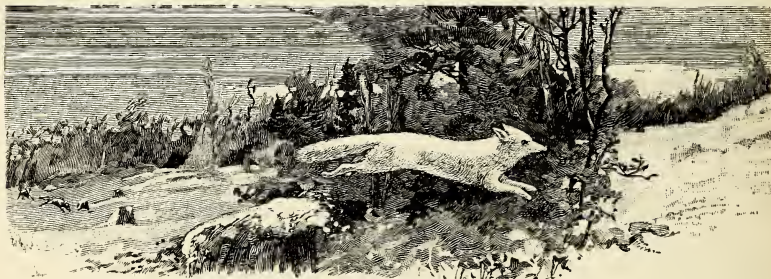
In order that the dogs may work well together they should be acquainted and run close instead of stringing out. They should work steadily in full cry, and slowly, as a fox, if too hard pressed by fast following dogs, will go straight away across country instead of circling within range of the hunter.

While foxes are quite numerous, they are seldom seen unless ahead of the hounds. It is their habit to seek retirement during the day in remote swamps and deep woods where they are not likely to be disturbed, and to emerge after nightfall to roam over the hills. Their lightness and strength of limb takes them many miles in a night.

In hunting them the hounds find a track made by a fox in his nocturnal ramble, and following it carefully in all its

windings, come to where the fox has stopped for the day. He is soon on his feet, and leading the dogs on what may be a long journey. If not followed too fast he will usually run in a large circle, and within a few hours swing around to the region from which he was started. The shrewd and experienced hunter, knowing the runways usually taken from a certain starting-point, conceals himself within range of one of them, and waits his chance for a shot.

If the fox comes his way, and if the hunter does not miss him, he is borne home in triumph and exultation over the



As Fleet as the Wind.

capture of the wariest, cunningest animal that ever led a hound. If the sly creature takes another course the sportsman shoulders his gun and starts for home, philosophically hoping for better luck next time.

Let me tell you about a hunt I had recently. One day in December we had our first snow, a light, feathery fall lasting during the day till sunset. It was of the right thickness to ensure perfect following the next morning, for snow following is the best, since it is easier for the dogs to keep to the track, and the fox can be distinguished at a much greater distance upon the whitened hills.

In the evening I met Sweet and Robbins, two veterans in fox-hunting, and a hunt was planned for the next day. Later

in the evening Robbins and I, with our two hounds, Buck and Sport, met at Sweet's house, where we were to pass the night in order to be in readiness for an early start and a long day.

The next morning, after fortifying ourselves against cold and fatigue by a solid breakfast, and after feeding the dogs, who were in a state of great excitement and crying to be off, we set out for Tatnic Hill, about a mile away, at about sunrise on as beautiful a winter morning as ever dawned; and though it was cold, our brisk walking kept us from feeling it unpleasantly.

On reaching the hill we loosed the hounds, and they bounded away in different directions, well knowing that if they separated they would sooner find a track. We walked around aimlessly in order to keep warm, until suddenly from south of us came floating up Buck's clear voice, singing the news that a track was found. In a very few moments Sport and Flirt had joined him. We could hear their voices growing fainter and fainter in the distance, and we knew that they were heading south away from us.

After a little we could hear them again, showing that they had changed their course, and were bearing east. We stood listening intently, till Sweet said: "Lou, that fox lies in the Scarborough swamp. He'll go north through the woods to Prince Hill, and then to Long Rock, and when he gets there, I shall be there!"

Off he started at a great pace. We laughed, and followed him. Sure enough, the hounds swung around to the Scarborough swamp, and soon after entering it their steady cry broke into a scream as the fox slipped out ahead of them and headed east instead of north.

Straight away east went the fox, till once more the dogs were out of hearing, and we tramped north through the snow to Barrett's Ledges, which we thought he would pass on his return from the river. On reaching them we sat down and rested, and waited further developments. We did not know, of course, whether the fox would come that way, or would take

some other route and destroy our chances for the day, for it was now the middle of the afternoon.

We had been sitting there nearly an hour, listening with eager ears, when far in the distance I thought I could faintly hear the voices of the hounds. There was a breathless pause,



Waiting for a Shot.

and then it came clearer and so unmistakable that I exclaimed, "They're coming, boys, run for places!"

At the word we scattered. Sweet went to the brow of the hill, Robbins concealed himself in a clump of white birches near an old barway, and I stood behind some trees near a path that ran out from the woods.

As I stood looking through a small field-glass which I carried, and while the hounds were yet far in the distance, I saw the fox come from the valley below us about a quarter of a

mile away, and springing upon a large rock, stop and listen for the dogs with his head turned and one foot uplifted. Satisfied that they were still hot on his track, he dropped from the rock and started on again, running as if he were getting tired, as his next move showed him to be.

In a number of years' hunting I have known foxes to do many clever things to throw off the dogs, such as running into the midst of a flock of sheep, and staying there to let the sheep trample out the sight and scent of their tracks, running in a shallow brook for a long distance, running in a travelled road, and other schemes that only a fox would think of. But the cleverest thing I ever saw done was done by that fox.

After leaving the rock he went to an old stone wall, mounted it and proceeded some distance on the top. Then stepping down he trotted straight out across a meadow for a distance of about twenty rods. He next turned around, retraced his steps to the wall, carefully stepping in the track he had made going out, remounted the wall, crouched for a spring, and bounded through the air like a ball, jumping in the opposite direction at least twenty feet, and coming again toward us.



At the Wall.

Nearer and nearer came the hounds, clearer and clearer came the music of their voices, Buck's bell-like notes, Flirt's high treble and Sport's deep bass making the hills ring again, till finally they burst into sight in the valley, running beautifully, giving tongue constantly, and after following hard all day, still running so close that you could lay a blanket over the three. On they came to the wall, and to the place where Reynard trotted out across the meadow. This track they followed, as he knew they would, till they came to the place where it stopped as completely and suddenly as though the fox had developed wings and flown away.

Then they stopped and seemed to be in consultation, for it was confusing to reach the end of a fresh fox-track in the middle of an open meadow.

But cunning as Reynard was, and well laid as was his plan, the intelligence and experience of his relentless pursuers were a match for him. After a few moments lost in vainly looking for a continuation of the track, the hounds separated. Buck and Flirt went one way and Sport the other, in large circles, knowing that one or the other must pick up the track again. Soon Sport's roar announced that he had recovered the trail, and in a moment they were in full cry again.

It was not long before I saw the fox bound into sight again at the edge of the woods, and after standing a moment switching his tail in evident annoyance, he started down the path directly to me. On he came, while my heart beat so that I could hear it, and I scarcely breathed. "A few more rods," I thought, "and I'll try him."

Suddenly he stopped, raised his head suspiciously and turned abruptly to the left, and ran lightly and swiftly to within eight rods of where Robbins lay. I watched him eagerly, and was wondering whether Robbins could have changed his position, when a wreath of smoke curled out of the white birches and floated lazily upward, and the fox sprang into the air and fell back motionless.

We hastened to him, and the hounds, their ardor increased by hearing the report of the gun, soon came up in great excitement and threw themselves upon the fox; but life was extinct, and they soon left him, and lay down to rest. We were then quite a distance from the village, and when we reached it we were all tired and hungry; but we had that fox's skin, had had a grand day's hunt, and one to be always pleasantly remembered and talked over.

LOUIS B. CLEVELAND.

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